

²
194. A user interface according to claim ¹193 comprising a sliding bar which moves along a continuum on which data storage device acoustic noise level and seek time vary inversely, the continuum including a first end comprising a high acoustic noise level/low seek time and a second end comprising a low acoustic noise level/high seek time.

Original
³
195. A user interface according to claim ¹193 further comprising a display area which displays discrete values corresponding to the acoustic noise level and/or the seek time of the data storage device.

⁴
196. A user interface according to claim ¹195 comprising discrete values which are selectable to alter the acoustic noise level and/or the seek time of the data storage device.

⁵
197. A user interface according to claim ¹193 wherein settings in the user interface override previous settings in the data storage device.

⁶
198. A user interface according to claim ¹193 further comprising a preview setting, the preview setting causing the data storage device to operate using an acoustic noise level set in the user interface.

⁷
199. A method of controlling operation of a data storage device, comprising:
generating a user interface, the user interface controlling one of a seek time of the data storage device and an acoustic noise level of the data storage device;
altering settings in the user interface for one of the seek time and the acoustic noise level of the data storage device in inverse relation; and
outputting commands to the data storage device to alter seek trajectory shape by shaping input signals to the data storage device to reduce selected unwanted frequencies from a plurality of frequencies in accordance with the altered settings in the user interface.

⁸
200. Computer-executable process steps stored on a computer-readable medium, the computer-executable process steps to control operation of a data storage device, the computer-

OFFICIAL



executable process steps comprising:

code to generate a user interface, the user interface controlling one of a seek time of the data storage device and an acoustic noise level of the data storage device;

code to alter settings in the user interface for one of the seek time and the acoustic noise level of the data storage device in inverse relation; and

code to output commands to the data storage device causing the data storage device to alter seek trajectory shape by shaping input signals to the data storage device to reduce selected unwanted frequencies from a plurality of frequencies in accordance with the altered settings in the user interface.

9
201. Apparatus for controlling operation of a data storage device, the apparatus comprising:

a memory which stores computer-executable process steps; and

a processor which executes the process steps so as (i) to generate a user interface, the user interface controlling one of a seek time of the data storage device and an acoustic noise level of the data storage device, (ii) to alter settings in the user interface for one of the seek time and the acoustic noise level of the data storage device in inverse relation, and (iii) to output commands to the data storage device causing the data storage device to alter seek trajectory shape by shaping input signals to the data storage device to reduce selected unwanted frequencies from a plurality of frequencies in accordance with the altered settings in the user interface.

10
202. Method of controlling operation of a data storage device, comprising:
providing a user interface for controlling one of a seek time of the data storage device and an acoustic noise level of the data storage device;

operating the user interface so as to alter settings of one of the seek time and the acoustic noise level of the data storage device in inverse relation; and

outputting commands to the data storage device causing the data storage device to alter seek trajectory shape by shaping input signals to the data storage device to reduce selected unwanted frequencies from a plurality of frequencies in accordance with the altered settings.

6

¹¹
203. A disk drive operatively controlled by a user interface, said user interface providing settings capable of altering one of a seek time of the disk drive and acoustic noise level of the disk drive in inverse relation, and indicating to the disk drive that one of the seek time settings of the disk drive and the acoustic noise level settings of the disk drive has been altered, the disk drive comprising:

means for performing a seek operation, the seek operation generating a plurality of frequencies; and

means for outputting commands to alter seek trajectory shape by shaping input signals to the means for performing the seek operation to reduce selected unwanted frequencies from said plurality of frequencies in accordance with the altered settings in the user interface.

¹²
204. The disk drive of claim ¹¹203 wherein the user interface comprises discrete values which are selectable to alter the acoustic noise level and/or the seek time of the disk drive.

¹³
205. The disk drive of claim ¹¹203 wherein a setting in the user interface overrides a previous setting.

¹⁴
206. Computer-executable process steps stored on a computer-readable medium, the computer-executable process steps to control operation of a data storage device, the computer-executable process steps comprising:

code providing a user interface for controlling one of a seek time of the data storage device and an acoustic noise level of the data storage device;

code to operate the user interface so as to alter settings for one of the seek time and the acoustic noise level of the data storage device in inverse relation; and

code to output commands to the data storage device to alter seek trajectory shape by shaping input signals to the data storage device to reduce selected unwanted frequencies from a plurality of frequencies in accordance with the altered settings in the user interface.

¹⁵
207. Apparatus for controlling operation of a data storage device, the apparatus comprising: